

**CLAIMS**

1. A method for determining the performance of a mobile terminal within a wire-  
less communications network, the method comprising the steps of:

5 receiving messages transmitted via the communications network associated  
with user transactions (110);

receiving messages transmitted via the communications network associated  
with mobile terminal type information (120);

10 correlating data within the received user transaction messages with data  
within the mobile terminal type information messages (130); and

deriving one or more performance indicators by mobile terminal type informa-  
tion from the correlated data (140).

2. A method for determining the performance of a mobile terminal within a wire-  
less communications network, the method comprising the steps of:

15 receiving messages transmitted via the communications network associated  
with user transactions (110);

receiving messages transmitted via the communications network associated  
with mobile terminal type information (120);

20 deriving, from the received user transaction messages, one or more perform-  
ance indicators for the user transactions (140); and

correlating the performance indicators regarding the user transactions with  
data within the mobile terminal type information messages (130).

25 3. The method of any of the preceding claims, further comprising the steps of:  
acquiring messages transmitted via the communications network associated  
with transactions; and

acquiring messages transmitted via the communications network associated  
with mobile terminal type information.

30 4. The method of any of the preceding claims, wherein the correlating step (130)  
associates the mobile terminal type information with one or more types of mobile  
terminal.

35 5. The method of any of the preceding claims, wherein the received mobile ter-  
minal type information messages (120) include mobility management signalling  
messages.

6. The method of claim 5, wherein the mobility management signalling messages include the International Mobile Equipment Identity for the mobile terminal type.

5        7. The method of any of the preceding claims, wherein the received user transaction messages (110) include user data.

10       8. The method of any of the preceding claims, further comprising the step of reconstructing the user transactions from the data within the received messages (215).

9. The method of any of the preceding claims, wherein the received user transaction messages (110) include session management signalling messages.

15       10. The method of claim 9, wherein the step of deriving the performance indicators (140) is based on data within the session management signalling messages.

20       11. The method of claim 9 or 10, further comprising the step of reconstructing user sessions from the data within the received user transaction messages (225).

25       12. The method of any of the preceding claims, wherein the step of deriving the performance indicators (140) is based on the period of time measured from the transmission of a message and the receipt of an acknowledgment signal for the transmitted message.

30       13. The method of any of the preceding claims wherein the step of deriving the performance indicators (140) is based on at least one of messaging downlink/uplink throughput and IP level throughput.

35       14. The method of any of the preceding claims wherein the step of deriving the performance indicators (140) is based on the ratio of user aborted messaging transactions.

15       15. The method of any of the preceding claims wherein the step of deriving the performance indicators (140) is based on the number of lost packets estimated from messaging retransmissions.

16. The method of any of the preceding claims, wherein the performance indicators are benchmarked by mobile terminal type.

17. The method of any of the preceding claims wherein the messages are acquired from an open interface.

18. The method of any of the preceding claims, further comprising the step of constructing a performance database (360) having fields that identify the type of mobile terminal and the type of user transaction (370) and corresponding fields that include calculated or estimated performance indicators (380).

19. The method of any of the preceding claims, further comprising the step of adjusting the frequency of mobile messaging signals required by the communications network to increase the number of messages containing data to identify the mobile terminal type.

20. A computer program product comprising program code portions for performing the steps of any of the preceding claims when the computer program product is run on a computer system.

21. The computer program product of claim 20, wherein the computer program product is stored on a computer readable recording medium.

22. A system comprising a computer processor and a memory coupled to the processor, where the memory is encoded with one or more programs that may perform the steps of any of claims 1 to 19.

23. An apparatus for determining the performance of a mobile terminal within a wireless communications network (510) comprising:

a first message receiving unit (520) for receiving messages transmitted via the communications network associated with user transactions;

a second message receiving unit (540) for receiving messages transmitted via the communications network associated with mobile terminal type information;

a derivation unit (530) for deriving, from the received user transaction messages, one or more performance indicators for the user transactions; and

a correlation unit (550) correlating the performance indicators regarding the user transactions with data within the mobile terminal type information messages.

24. An apparatus for determining the performance of a mobile terminal within a wireless communications network (510) comprising:

5 a first message receiving unit (520) for receiving messages transmitted via the communications network associated with user transactions;

a second message receiving unit (540) for receiving messages transmitted via the communications network associated with mobile terminal type information;

a derivation unit (530) for deriving, from the received user transaction messages, one or more performance indicators for the user transactions; and

10 a correlation unit (550) for correlating the performance indicators regarding the user transactions with data within the mobile terminal type information messages.